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Dzhuvarly, Ch. M., V. G. Vechkhaizer, and P. V. Leonov. Investigation of a Discharge between Dielectric Surfaces by Means of an Electron-Optical Converter. (E/T) – 1171 [1515]

Egorov, A. M. and A. F. Kivshik. Microwave Field Distribution in a Plasma Waveguide. (E) – 392 [508]
Elesin, V. F. (See Bykovskii, Yu. A.) – 2020 [2578]
Eletskii, A. V. and B. M. Smirnov. Contraction of the Positive Column of a Glow Discharge. (T) – 1308 [1682]
Eliseev, P. G. and V. P. Strakhov. Continuous-Wave Semiconductor Laser with Watt Output. (E) – 1214 [1564]
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Ender, A. Ya. Collisionless Thermionic Converter in a Transverse Magnetic Field. (T) – 426 [551]
– (See Babanin, V. I.) – 434 [561]
– (See Kuznetsov, V. I.) – 495 [642]
– (See Babanin, V. I.) – 646 [833]
Ermakov, A. I. and N. I. Nazarov. Microwave Radiation from a Plasma due to the Interaction of an Electron Beam with the Fast Magnetoacoustic Wave. (E) – 609 [785]
Ermakov, B. A. and A. V. Lukin. Thermal Conditions and Energy Parameters of a Periodically Pulsed Ruby Laser. (E/T) – 1097 [1418]
Erofeev, V. S. and Yu. V. Sanochkin. Ionization Instability of a Self-Sustaining Low-Pressure Discharge in a Strong Transverse Magnetic Field. (T/E) – 1413 [1810]
Erokhin, N. S. and S. S. Moiseev. Second-Harmonic Generation and Decay Processes in an Inhomogeneous Plasma. (T) – 885 [1144]
Ershov, A. G. (See Balagurov, A. Ya.) – 352 [458]
Evtushenko, T. P. and G. V. Ostrovskaya. Spectroscopic Study of a Laser Spark. III. Continuous Spectrum. (E) – 823 [1067]
Fadeeva, É. I. (See Kuznetsov, A. Ya.) – 123 [170]
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Fedorenko, N. V. Electron Capture and Loss by Atoms, Protons, and Negative Hydrogen Ions in Collisions with Atoms and Molecules. Experimental Cross-Section Data. (R) – 1947 [2481]
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– (See Nesterov, L. A.) – 505 [651]
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Fidel'skaya, R. P. (See Kuznetsov, V. S.) – 1635 [2099]
Fikhmanas, R. F. and P. Sh. Fridberg. Howe Method of Calculating the Capacitance of an Object and Its Relation to Variational Principles. (T) – 1027 [1327]
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Fursei, G. N. and G. K. Kartsev. Stability of Field Emission and Migration Processes Preceding Development of a Vacuum Arc. (E/T) – 225 [310]
– (See Mesyats, G. A.) – 1202 [1551]
Gabovich, M. D. and I. A. Soloshenko. Excitation of Ion-Cyclotron Oscillations in a Plasma Formed by an Ion Beam. (E) – 184 [254]
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– (See Babanin, V. I.) – 646 [833]
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– Effect of a Magnetic Field on the Macroscopic Properties of a Flowing Liquid. (T/E) – 1374 [1764]
Galaktionov, B. V., V. V. D'yachenko, and O. N. Shcherbinin. High-Frequency Plasma Heating near the Lower Hybird Frequency. (E) – 1809 [2317]
– V. E. Golant, V. V. D'yachenko, and O. N. Shcherbinin. Determination of the Limiting Frequency for Plasma Absorption of High-Frequency Waves at Frequencies between the Electron Cyclotron Frequency and the Lower Hybrid Frequency. (E) – 1813 [2322]
Gall', L. N., R. N. Gall', V. A. Lednev, and L. K. Veselova. Surface-Ionization Ion Source for Mass Spectrometers. (E) – 1185 [1534]
– Ionization Chamber for a Mass-Spectrometer Ion Source. (E) – 1545 [1982]
– (See Brodskii, G. N.) – 1570 [2015]
Gall', R. N. (See Gall', L. N.) – 1185 [1534]
Ganichev, D. A., V. A. Stanskii, and S. A. Fridrikhov. Excitation Threshold of a Secondary Emission Resonance Discharge at 2.8 GHz. (E) – 1477 [1895]
Gannitskii, A. I., É. M. Drobyshevskii, and S. I. Rozov. Nonstationary Three-Dimensional Plasma Flow in a Homopolar Device. (T/E) – 1681 [2156]
Gapanovich, V. G. Isochronous Bending Magnet for a Linotron. (T/E) – 1909 [2443]
Gasparyan, L. G. (See Bezirganyan, P. A.) – 1896 [2427]
Gavrilov, V. E. (See Andreev, S. I.) – 1002 [1300]
Gel'tsel', M. Yu. and A. A. Podminogin. High-Power Controlled Gas Rectifiers with Cold Solid Cathodes for Switching Large Currents. (E) – 1327 [1707]
Gerasimov, V. F. (See Snedkov, B. A.) – 1887 [2415]
Gernet, G. E. Effect of Radiation Damping on the Motion of Charged Particles in an Inhomogeneous Magnetic Field. (T) – 1230 [1581]
Ginzburg, V. M. and Yu. I. Filenko. Optical Refraction in Holographic Interferometry of Phase Objects. (T) – 1730 [2217]
– and B. I. Fedorovskii. Resolving Power of Holograms for Available Photographic Materials. (E) – 1733 [2221]
Gladkovskii, I. P. (See Abramov, F. G.) – 1004 [1302]
Gladun, A. D. and V. G. Leiman. Hydrodynamic Stability of Electron Streams in Vacuum. (T) – 1970 [2513]
Glasko, V. B., A. G. Sveshnikov, and N. N. Semashko. Determination of the Optimum Focusing Conditions for Charged Particles. (T/E) – 196 [270]
Glazkov, A. A. and B. N. Babkin. Optimization of the Phase Focusing Characteristics of an Analyzer for the Analysis of a Three-Component Beam. (T) – 206 [283]
Glasov, B. V. (See Yuferov, V. B.) – 457 [592]
Globenko, Yu. G., D. G. Koshkarev, and A. V. Barkhudaryan. Coulomb Collisions in Dense Beams. (T) – 1880 [2405]
Golant, V. E., M. V. Krivosheev, and V. I. Fedorov. Linear Wave Transformation and Absorption in a Plasma of Small Transverse Dimensions. (E/T) – 282 [382]
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– (See Galaktionov, B. V.) – 1813 [2322]
Golovanivskii, K. S. Space Potential in a Magnetized Plasma. (E) – 1146 [1486]
– and A. I. Lushchik. Synthesized Cesium Plasma Beam. I. (E/T) – 1149 [1490]
– and A. I. Lushchik. Synthesized Cesium Plasma Beam. II. (E/T) – 1155 [1497]
Gol'ts, É. Ya. and A. Z. Khodzhaev. A Method of Obtaining Short Dense Plasmoids. (E) – 1688 [2164]
Golubentsev, A. F. and A. F. Shapovalov. Spectral Density of the Fluctuations in Velocity and Kinetic Potential at a Uniform Cathode. (T) – 1192 [1542]
Goncharenko, G. M. and I. N. Romanenko. Discharge Channel in Helium at 100 atm and in Air. (E/T) – 1990 [2538]

– (See Bondaletov, V. N.) – 1724 [2209]
Goncharenko, I. I. (See Revutskii, E. I.) – 839 [1086]
Goncharenko, V. P., I. I. Demidenko, N. S. Lomino, and V. G. Padalka. Injection and Confinement of a Plasma in a Closed Magnetic Quadrupole. (E) – 932 [1206]
– (See Belikov, A. G.) – 592 [764]
Gordon, E. B. and A. N. Ponomarev. Optimum Parameters for Multiple-Channel Collimators for Atomic Beams. (T) – 866 [1120]
Gorelov, V. A. Probe Measurements behind a Strong Shock Wave in Air. (T/E) – 144 [198]
– and Yu. K. Frolov. Temperature behind a Strong Shock in an Electric Shock Tube. (E/T) – 640 [825]
Gorshkov, A. S., V. F. Marchenko, and A. F. Tselykovskii. Parametric Wave Generation at a Liquid Surface. (T/E) – 1030 [1331]
Goryachev, V. L. and G. S. Sukhov. Breakdown of the Electrode Sheath in a Moving Argon Plasma. (E) – 326 [429]
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Gos'kov, P. I. Accelerating System of An Iron-Free Waveguide Synchrotron. (T/E) – 111 [155]
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Grakov, V. E., I. G. Nekrashevich, V. N. Taborov, and E. P. Turomsha. Current Density in the Cathode Spot of an Electric Arc. (T/E) – 1664 [2134]
Grebenshchikov, S. E. (See Berezhetskii, M. S.) – 1259 [1618]
Grigor'ev, V. P. and A. N. Didenko. Superconductor Cavities for Particle Bunching. (T) – 1270 [1632]
– and A. P. Privezentsev. Classical Calculation of Induced Synchrotron Radiation. (T) – 1474 [1892]
– and A. N. Didenko. Instability of Ring Currents. (T) – 1782 [2283]
Grigor'ev, Yu. N. (See Adeishvili, D. I.) – 843 [1091]
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Grinberg, G. A. and O. M. Chekmareva. Motion of the Phase Interface in the Stefan Problems. (T) – 1579 [2025]
Grishaev, I. A., G. K. Dem'yanenko, and K. S. Rubtsov. Radial Motion of Electrons and Beam Focussing in a 300-MeV Linear Accelerator Allowing for the Effect of Electrical Field Asymmetry in Matching Elements of Accelerating Sections. (T/E) – 106 [149]
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Gufel'd, I. L. Surface State of Electrodes Aged by Breakdown and Breakdown Mechanisms in Vacuum. (E) – 508 [654]
Gurevich, G. L. and Ya. I. Khanin. Instability of Steady-State Oscillation in a Laser with a Nonlinear Filter. (T) – 1217 [1566]
Gur'ev, T. T., V. V. Kyun, E. P. Ostapchenko, and V. A. Stepanov. Transverse Distribution of Atoms and Electrons in a High-Current Discharge in a Capillary. (E/T) – 606 [781]
Gurovich, V. Ts., B. Yu. Naidorf, and A. M. Fridman. Alfvén Waves in an Inhomogeneous Plasma with Finite Pressure. (T) – 337 [441]
Guseva, L. G. Left-Hand Branch of the Paschen Curve in Inert Gases up to 100 kV. (E) – 1760 [2253]
Guz'kov, Yu. K. (See Pashchenko, V. P.) – 1690 [2167]
Il'in, O. G. (See Adeishvili, D. I.) – 843 [1091]
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Indykul, V. P. and V. I. Shevchenko. Parametric Instability due to the Interaction of Phase Oscillators with a Plasma. (T) – 564 [728]
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Ionov, N. I. and É. N. Kutsenko. Interaction of Oxygen and Carbon Monoxide with Tungsten. (E) – 297 [398]
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– (See Makhnenko, L. A.) – 1745 [2236]
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Ivanova, T. I. and G. E. Pustovalov. Calculation of the Ion Trajectories in a Penning Discharge. (T) – 1646 [2112]
Kachanov, A. V., E. S. Trekhov, and E. P. Fetisov. Electrodynamic Model of a High-Frequency Plasma Torch. (T/E) – 248 [340]
Kagan, Yu. M., N. B. Kolokolov, V. M. Milenin, and A. M. Mirzabekov. Measurement of Plasma Electron Distribution Function in the Presence of Noise. (E) – 1019 [1319]
– and R. I. Lyagushchenko. Effective Number of Ionization and Recombination Events in the Positive Column. (T) – 1568 [2013]
– (See Vagner, S. D.) – 1159 [1501]
Kalinin, B. A. (See Suetin, P. E.) – 1349 [1735]
Kalmykov, A. A., V. I. Tereshin, V. V. Chebotarev, N. A. Khizhnyak, and O. E. Lysenko. Plasmoid Motion in an Axially Symmetric Spatially Periodic Magnetic Field. (T) – 359 [466]
– V. I. Tereshin, and V. V. Chebotarev. Hall Effect in Plasma Flow in a Spatially-Periodic Magnetic Field. (E) – 584 [754]
– A. D. Timofeev, and B. A. Shevchuk. Plasma Acceleration under Various Operating Conditions in a Pulsed Coaxial Plasma Accelerator. (E) – 2002 [2553]
Kalygin, A. G., N. P. Kozlov, L. V. Leskov, and V. B. Saenko. Current Distribution in a Pulsed Plasma Accelerator with Dielectric Erosion. (E) – 355 [462]
– N. P. Kozlov, N. A. Koreshchenko, L. V. Leskov, and V. B. Saenko. Energy Characteristics of a Pulsed Dielectric-Erosion Plasma Accelerator. (E) – 928 [1202]
Kaminskii, V. A. (See Tunitskii, N. N.) – 1652 [2119]
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Kapitanskii, V. R., A. I. Livshits, and I. M. Metter. Small Hydrogen Generator. (E) – 1932 [2468]
Kaplan, V. B. (See Dyuzhev, G. A.) – 320 [424]
Karasev, I. G., V. M. Kirillov, V. É. Norskii, V. I. Samoilov, and P. I. Ulyakov. Disintegration of Metals by a Laser Beam. (E) – 1523 [1954]
Karetskaya, S. P., V. M. Kel'man, and E. M. Yakushev. Transaxial Electrostatic Lens. (T) – 2010 [2563]
Karplyuk, K. S. and Ya. I. Kolesnichenko. Slow High-Frequency Waves in a Magnetized Plasma Waveguide. (T) – 37 [54]
Karpov, G. V., V. E. Skurat, and V. L. Tal'roze. Mass-Spectrometer Study of Vacuum Pumping of Liquid from Microcapillaries Open to the Atmosphere. (E) – 1021 [1321]
Karpukhin, V. I. (See Zykov, V. G.) – 1222 [1573]
Kartashev, V. P., V. I. Kotov, and R. A. Rzaev. Focusing Properties of a Helical Quadrupole Lens. (T) – 1535 [1969]
Kartsev, G. K. (See Fursei, G. N.) – 225 [310]
– (See Mesyats, G. A.) – 1202 [1551]
Kasatkin, A. P. and V. L. Kon'kov. Kinetic Theory of the Pinch Effect. (T) – 1612 [2070]
Kazanskii, V. B., L. N. Litvinenko, R. V. Shapiro, and V. P. Shestopalov. Theoretical and Experimental Study of the Properties of an Artificial Dielectric. (T/E) – 487 [631]
Kaz'min, G. S. Space-Charge Limiting in Segmented Electron Accelerator Tubes. (T/E) – 994 [1290]
Kel'man, V. M., I. V. Rodnikova, M. L. Uteev, and P. A. Finogenov. Electrostatic-Prism Mass Spectrometer with Energy Focusing. (E) – 415 [535]
– I. V. Rodnikova, and E. M. Yakushev. Chromatic Aberration in a Deflection System for a Prism Mass Spectrometer with Energy Focusing. (T) – 1113 [1441]
– V. A. Rastorguev, and E. M. Yakushev. Geometric and Chromatic Aberrations in Three-Electrode Telescope Systems. (T) – 1116 [1445]
– V. A. Rastorguev, and E. M. Yakushev. Four-Electrode Deflecting Telescope Systems. I. Paraxial Properties. (T) – 1125 [1458]

– V. A. Rastorguev, and E. M. Yakushev. Aberrations in Electrostatic Prisms. (T) – 1131 [1467]
– V. A. Rastorguev, and E. M. Yakushev. Four-Electrode Deflecting Telescope Systems. II. Aberrations. (T) – 1901 [2434]
– (See Bobykin, B. V.) – 620 [799]
– (See Davydovskii, V. Ya.) – 1235 [1588]
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Khizhnyak, N. A. and O. E. Lysenko. Equilibrium of a Plasma Ellipsoid in an External High-Frequency Field. (T) – 525 [673]
– Diffusion Broadening of a Plasmoid in a Longitudinal Magnetic Guide Field. (T) – 1264 [1625]
– B. G. Safronov, V. L. Vereshchagin, and N. P. Popov. Electrode Erosion in Pulsed Plasma Accelerators. (E) – 1828 [2341]
– and O. E. Lysenko. Stability of an Incompressible Equilibrium Plasma Ellipsoid in the Field of a Traveling Electromagnetic Wave. (T) – 2023 [2581]
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Kishinevskii, L. M. Characteristic Energy Losses in Ne^+–Ne Collisions. (T) – 2027 [2585]
Kislov, A. Ya. and A. I. Morozov. Distribution of Total Pressure in a Plasma Flow Issuing from an Injector. (E) – 595 [768]
– (See Zubkov, I. P.) – 1796 [2301]
Kislyakov, A. I. and M. P. Petrov. Plasma Diagnostics in the TM-3 Tokamak with a Fast Hydrogen Atomic Beam. (E/T) – 1252 [1609]
– (See Abramov, F. G.) – 1004 [1302]
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Klimenko, I. S. and E. G. Matinyan. Parallel Matched Filtering by Means of Optically Matched Fourier Holograms. (E) – 1364 [1753]
Kliot-Dashinskii, M. I. Carrier-Frequency Shift of a Modulated Signal by Coupled Laser Transitions. (T) – 1091 [1410]
Klyarfel'd, B. N. and A. S. Pokrovskaya-Soboleva. Vacuum Arc with a High Ignition Voltage. (E) – 149 [206]
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– (See Yuferov, V. B.) – 2041 [2598]
Kochmanova, L. V., Ts. G. Breido, V. L. Goryachev, and G. S. Sukhov. Ionization behind a Shock Front in Argon. (E) – 463 [600]
Kogan, E. Ya., S. S. Moiseev, and V. N. Oraevskii. Variational Analysis of Plasma Dissipative Instabilities. (T) – 551 [711]
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Kolesnikov, P. M. and N. N. Stolovich. Mass Transfer Processes in Electrodynamic Plasma Acceleration. (T) – 922 [1194]
– V. A. Korotkov, and G. A. Nesvetailov. Volt-Ampere Characteristics of Exploding Wires. (E/T) – 1175 [1520]
Kolokolov, N. B. (See Brodskii, V. B.) – 383 [496]
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Kolot, V. Ya., V. I. Tatus', V. F. Rybalko, and Ya. M. Fogel'. Investigation of Oxygen Adsorption on a Molybdenum Surface by Means of Secondary Ion-Ion Emission. (E) – 1934 [2469]
Koltypin, E. A., A. I. Nastyukha, and P. A. Smirnov. Rectification in a Low-Pressure Arc with a Hollow Cold Cathode. I. (E) – 1703 [2181]
– A. I. Nastyukha, and P. A. Smirnov. Arc Dynamics in a High-Current Hollow-Cathode Rectifier. II. (E) – 1710 [2189]
Komar, A. P. (See Kovalev, A. I.) – 1750 [2242]
Komel'kov, V. S. and V. I. Modzolevskii. Tandem Plasma Acceleration in Coaxial Systems. (T) – 1674 [2147]
Komin, A. V., K. M. Lobanov, and V. G. Ustyuzhaninov. Effect of Electric Field on Particle Motion in a Stellarator. (T) – 1043 [1346]
– (See Bocharov, V. N.) – 1033 [1334]
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Kondrat'ev, F. V. and G. V. Sinyutin. Effect of Anode Temperature on a Cesium Thermionic Converter in the Arc Regime. (T/E) – 650 [839]
Kon'kov, V. L. (See Kasatkin, A. P.) – 1612 [2070]
Kononenko, S. G., L. V. Reprintsev, and A. M. Shenderovich. Resonances in Nonlinear Synchrotron Oscillations. (T/E) – 988 [1282]
– (See Dovbnya, A. N.) – 200 [275]
Kononenko, V. I. (See Adamov, I. Yu.) – 1887 [2289]
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Korobova, I. L. (See Baksht, F. G.) – 653 [843]
– (See Baksht, F. G.) – 1940 [2474]
Koron, E. D. and A. A. Plyutto. Acceleration of Ions of Cathode Material in Vacuum Breakdown. (E) – 1986 [2534]
Korotkov, V. A. (See Kolesnikov, P. M.) – 1175 [1520]
Korshakov, N. G. Kinetic Description of Plasma Configurations. (T) – 1960 [2498]
Korsunskii, A. M. and N. A. Khizhnyak. Limiting Oscillation Amplitudes of a Multivelocity Electron in Crossed Electric and Magnetic Fields. (T) – 53 [77]
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Koshkarev, D. G. (See Globenko, Yu. G.) – 1880 [2405]
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– (See Novosad, Z. I.) – 1850 [2368]
Koss, V. A. Approximate Solution of the Stefan Problem. (T) – 1219 [1568]
Kossyi, I. A. (See Berezhetskii, M. S.) – 1259 [1618]
Kostyukova, Yu. S. and F. M. Nekrasov. Oscillations of a Magnetized Plasma in a Standing Wave (TE Mode). (T) – 1077 [1390]

Kotousov, L. S. Determination of Thermodynamic Mixing Potential of a Binary Mixture from Interdiffusion. (T) – 1554 [1994]
– Entropy Principle for the Thermal Diffusion of a Binary Mixture. (T) – 1562 [2005]
Kotov, V. I. (See Kartashev, V. P.) – 1535 [1969]
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– (See Baranchuk, N. S.) – 568 [733]
– (See Baranchuk, N. S.) – 1051 [1355]
Kostarev, A. A. Electrodynamics of Spatially Inhomogeneous Laser Action. (T) – 1369 [1758]
Kovalev, A. I., A. P. Komar, L. B. Parfenov, A. N. Prokof'ev, and G. M. Shklyarevskii. Method of Measuring the Polarization of an Oriented Hydrogen Target. (T/E) – 1750 [2242]
Kozin, V. P. and A. E. Tolstoi. Movable Shields for Shaping Azimuthal Fringing Fields in a Cyclic Magnetic System with Slots. (T/E) – 1240 [1594]
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– (See Kalygin, A. G.) – 355 [462]
– (See Kalygin, A. G.) – 928 [1202]
Kozyrev, A. N. and B. P. Peregud. Structure of the Magnetic Field in the Tornado Device. (T/E) – 734 [950]
– B. P. Peregud, and B. D. Khalyapin. Visualization of Complicated Magnetic Fields. (E) – 2014 [2568]
Kozyrev, Yu. P. (See Bykovskii, Yu. A.) – 1877 [2401]
– (See Bykovskii, Yu. A.) – 2020 [2578]
Krasnov, I. P. Field of an Infinite Metal Cylinder in the Presence of a Point Charge. (T) – 1758 [2251]
Krasovitskii, V. B. Self-Excitation of a Molecular Beam Moving through a Slow-Wave System. (T/E) – 1028 [1328]
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– (See Babanin, V. I.) – 646 [833]
Kravtsov, I. A. (See Zhitnikov, P. A.) – 1662 [2131]
Krivorutskii, E. N. and V. N. Tsytovich. Drift Instabilities in a Plasma in a High-Frequency Electromagnetic Field. (T) – 1600 [2054]
Krivoshchekov, G. V. and E. G. Shirokov. Arc Phenomena on a Tungsten Knife-Edge. Destruction of the Knife-Edge by a Vacuum Arc. (E) – 1298 [1669]
Krivosheev, M. V. Production of a High-Density Plasma by Microwaves in a Magnetic Field. (E) – 1805 [2312]
– (See Golant, V. E.) – 282 [382]
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Kucherov, R. Ya., V. K. Nevolin, G. I. Tkeshelashvili, and V. P. Tsiberev. Low-Voltage Arc in a Cesium-Argon Mixture at Low Cesium Pressures. (E) – 1697 [2175]
– V. K. Nevolin, G. I. Tkeshelavshili, and V. P. Tsiberev. Effect of Argon on Thermionic Converter Operation at Low Cesium Pressures. (E) – 1937 [2472]
Kudryavtsev, A. M. (See Astrelin, V. T.) – 915 [1185]
Kulakov, A. V. and A. A. Rumyantsev. Transformation of Space-Charge Waves in Nonuniform Cylindrical Electron Beams. (T) – 753 [978]
– and A. A. Rumyantsev. Kinetic Power Theorem for a Dispersive Electron Beam with Adiabatically Varying Parameters. (T) – 946 [1224]
Kulygin, V. M., A. A. Panasenkov, A. G. Sveshnikov, and N. N. Semashko. Injector for Fast Hydrogen Atoms. I. Magneto-optics. (T/E) – 1628 [2091]
Kursanov, Yu. V. (See Demirkhanov, R. A.) – 1047 [1351]
– (See Demirkhanov, R. A.) – 1489 [1911]
Kurtmullaev, R. Kh., V. I. Pil'skii, and N. V. Semenov. Probe Measurements of Electron Heating behind a Plasma Shock. (E/T) – 804 [1044]
Kurzenkov, V. N. (See Belousova, I. M.) – 301 [402]
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– A. É. Rafal'son, N. A. Kholin, and G. E. Tsigel'man. A Mass-Spectrometer Method for the Rapid Analysis of Solids. (E) – 1183 [1531]
Kuz'min, R. N. (See Balaev, N. F.) – 1187 [1537]
Kuz'min, Yu. N. Electrostatic Field of a System of Circular Disks. (T) – 1777 [2276]
Kuznetsov, A. Ya., A. A. Poplavskii, A. M. Bonch-Bruevich, Ya. A. Imas, V. N. Rozhdestvenskii, G. P. Tikhomirov, and E. I. Fadeeva. Damage of Reflecting Dielectric Coatings by Laser Radiation. (E) – 123 [170]
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Kuznetsov, V. I., Yu. G. Morozov, and A. Ya. Ender. Expansion of the Anode Region and Volt-Ampere Characteristics of a Thermionic Converter in a Transverse Magnetic Field. (T) – 495 [642]
Kuznetsov, V. S. and R. P. Fidel'skaya. Intense Beams with an Arbitrary Phase-Density Distribution in External Focusing Fields. (T) – 1635 [2099]
Kuznetsov, Yu. K., O. S. Pavlichenko, and G. L. Iosel'son. Microwave Radiation from a Reflex Discharge in an Inhomogeneous Magnetic Field. II. (E) – 89 [128]
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Leiman, V. G. (See Gladun, A. D.) – 1970 [2513]
Leonov, P. V. (See Dzhuvarly, Ch. M.) – 1171 [1515]
Leont'ev, N. I., A. P. Timoshenko, and Yu. K. Udovichenko. Excitation of High-Frequency Oscillations in the Interaction of a High-Current Pulsed Electron Beam with a Plasma. (E) – 728 [942]
– (See Iremashvili, D. V.) – 636 [820]
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– (See Balagurov, A. Ya.) – 352 [458]
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– and E. A. Kornilov. Investigation of the Time Behavior of the Electron Temperature and Density in a Beam-Plasma Discharge. (T/E) – 816 [1059]
Limar', A. G. and N. G. Matsiborko. Electron Trapping in a Betatron. (E) – 1362 [1752]
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– (See Demidenko, I. I.) – 1816 [2326]
– (See Demidenko, I. I.) – 1823 [2335]
Lotkova, É. N., V. N. Ochkin, and N. N. Sobolev. Plasma Composition and Population Inversion in a CO_2 Laser. (E/T) – 1085 [1402]
Lovetskii, E. E. and V. P. Silakov. Surface Oscillations in a Magnetized Plasma. (T) – 719 [930]
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– (See Golovanivskii, K. S.) – 1155 [1497]
Lutsenko, E. I., Ya. B. Fainberg, N. S. Pedenko, and V. A. Vasil'chuk. Electron Energy Spectrum in a Linear Plasma Betatron. (E) – 410 [529]
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– V. N. Tsytovich, and B. G. Shchinov. Nonlinear Instabilities of Plasma Waves with High Collision Frequencies. (T) – 538 [693]
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– Interaction of a Molecular Beam with a Silicon Surface. (E) – 1870 [2392]
Mesyats, G. A., V. P. Rotshtein, G. N. Fursei, and G. K. Karisev. Expansion Velocity of the Plasma Formed during the Electrical Explosion of a Microscopic Tip by a High-Density Field-Emission Current. (E) – 1202 [1551]
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– (See Baksht, F. G.) – 653 [843]
– (See Baksht, F. G.) – 1940 [2474]
Molchanov, S. S. (See Morqz, E. M.) – 850 [1100]
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– (See Kislov, A. Ya.) – 595 [768]
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– (See Dobrokhotov, E. I.) – 808 [1048]
– (See Dobrokhotov, E. I.) – 1063 [1371]
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– (See Kostyukova, Yu. S.) – 1077 [1390]
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– (See Moizhes, B. Ya.) – 317 [419]
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Novgorodov, M. Z., V. N. Ochkin, and N. N. Sobolev. Vibrational Temperatures in a CO_2 Laser. (E) – 977 [1268]
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– (See Burmakov, A. P.) – 514 [660]
– (See Evtushenko, T. P.) – 823 [1067]
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– (See Borisov, S. F.) – 475 [615]
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Sena, L. A. Fission of the Cathode Spot of a Low-Pressure Arc. (T/E) – 1513 [1942]
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